# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/023,960 | 12/17/2001 | Shahid Mujtaba | 10013648 -1 | 6641 |

7590    05/30/2006

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| EXAMINER |
|---|
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| ART UNIT | PAPER NUMBER |
|---|---|
| 3623 | |

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| | 10/023,960 | MUJTABA ET AL. |
| **Office Action Summary** | Examiner | Art Unit |
| | Kalyan K. Deshpande | 3623 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *16 March 2006*.

2a)☒ This action is **FINAL**.    2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2,5-17,20-26 and 29-35* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-17,20-26 and 29-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

# DETAILED ACTION

## *Introduction*

1.     The following is a final office action in response to the communications received on March 16, 2006. Claims 1-35 are now pending in this application.

## *Response to Amendment*

2.     Applicants' amendments to claims 1, 5-7, 12, 22, 25, and 29-30 are acknowledged. Applicants' cancellation of claims 3-4, 18-19, and 27-28 is acknowledged. Examiner withdraws the 35 U.S.C. 102(b) rejections and asserts 35 U.S.C. 103(a) rejections as necessitated by amendment.

## *Response to Arguments*

3.     Applicants' arguments filed on March 16, 2006 have been fully considered but are moot in view of the new ground(s) of rejection. Applicants argues i) Huang fails to teach "end of product life integrated action plan" and ii) Huang fails to teach "end of product life materials planning parameters".

Applicants' arguments regarding Huang failing to teach "end of product life integrated action plan" with respect to claims 1, 12, and 25 have been considered but are moot in view of the new ground(s) of rejection as necessitated by amendment.

Applicants' arguments regarding Huang failing to teach "end of product life materials planning parameters" with respect to claims 1, 12, and 25 have been considered but are moot in view of the new ground(s) of rejection as necessitated by amendment.

## *Claim Rejections - 35 USC § 103*

4.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.    Claims 1-2, 5-17, 20-26 and 29-35 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Huang et al. (U.S Patent No. 6151582) in view of Cheng et al. (U.S.

Patent No. 6006192).

As per claim 1, Huang teaches:

A method for defining an optimal integrated action plan for procurement,

manufacturing, and marketing comprising:

a) accessing materials planning parameters (see column 13 lines 9-67 -

column 14 lines 1-19, column 19 lines 32-67- column 99 lines 1-4, and column

107 lines 36-67 – column 112 lines 1-20; where the aggregate production

planning system accesses material planning parameters in the system);

b) accessing pricing parameters (see column 19 lines 63-67 – column 24

lines 1-48 and column 39 lines 60-67 – column 90 lines 1-53; where the

forecasting module incorporates market data, including inventory costs, raw

material costs, delivery costs, product sales price, and promotional discounts in

to optimizing the decision management system); and

c) evaluating said materials planning parameters and said pricing parameters

in conjunction to define said integrated action plan (see column 27 lines 1-67 –

column 99 lines 1-4; where the system evaluates market data, sales data, materials data, inventory data, and production data to determine a plan).

Huang fails to explicitly teach a system that accounts for end of product life situations. The Huang system, however, does teach allowing a user to control the inventory levels of finished products by setting inventory policy parameters. The parameters can be set to a maximum or minimum inventory level. For a discontinued product, a user would set the finished product inventory levels to a minimum. Cheng et al. teach a system that accounts for end of product life (see column 3 lines 20-53, column 9 lines 34-62, and column 10 lines 50-63; where constraints input in to the optimization engine include the set of end products, demand for the end product, and ending inventory levels. The optimization engine uses these and other constraints to generate an optimized product action plan by means of linear programming. The system allows for the input of an obsolescence factor and time period. The obsolescence factor and time period dictate how the ending of a product will be handled (maximize profits or minimize inventory) and the duration to obsolete the product.). The advantage of being able to account for end of product life situations is that it allows the production plan to eventually stop producing finished products and thereby minimizing finished product inventory on-hand. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to incorporate the feature of accounting for the end of a product life taught by Chen et al. to the Huang system's inventory policies to minimum to account for end of product life situations in order to eventually cease

production of the product and minimize the finished product inventory level, which is a

goal of Huang (see column 1 lines 58-64).

As per claim 2, Huang teaches:

The method as recited in claim 1, wherein said integrated action plan comprises:

a build plan, a procurement plan, and a sales and pricing plan (column 13

lines 9-67 – column 14 lines 1-19, column 19 lines 32-67 – column 99 lines 1-4,

and column 107 lines 36-67 – column 112 lines 1-20; where the system

generates a master production plan (build plan), a materials requirement plan,

and a sales and pricing plan. The materials requirement plan incorporates the

need to procure critical components from vendors. The system reconciles

forecast and profit data to determine a sales plan. The system also determines a

pricing plan based on the input from all of the modules.).

As per claim 5, Huang teaches:

The method as recited in claim 1, wherein said materials planning parameters

comprise:

bill of material, and inventory (see column 13 lines 9-67 – column 14 lines 1-

4, column 27 lines 1-67 – column 28 lines 1-24, and figure 67; where the

materials planning uses a bill of materials and manages an inventory.).

Claim 5 further recites the limitation of "end of product life" which has already

been addressed by the rejection of claim 1; therefore the same rejection applies to this

claim.

As per claim 6, Huang teaches:

The method as recited in claim 1, wherein said pricing parameters comprise:

a parameterized demand curve formed using a pricing information generating

technique (see column 12 lines 51-67 – column 13 lines 1-7, column 18 lines 7-

67 – column 25 lines 1-5, and figures 11, 12, 14, 56, and 57; where the demand

management uses sales forecasts and marketing data to create demand

parameters, including forecasted sales volumes, costs, and finished product

prices. Parameterized demand curve in the present invention is defined as the

evaluation of sales information to create a distinct marketing goal (see

specification p. 10 lines 6-14).).

Claim 6 further recites the limitation of "end of product life" which has already

been addressed by the rejection of claim 1; therefore the same rejection applies to this

claim.

As per claim 7, Huang teaches:

The method as recited in claim 1, wherein said evaluating said materials planning

parameters and said pricing parameters is done via an optimization engine

employing a mathematical programming model and technique (see column 61 lines

27-67 – column 99 lines 1-4; where materials planning and pricing parameters is

done via optimization using linear programming.).

Claim 7 further recites the limitation of "end of product life" which has already

been addressed by the rejection of claim 1; therefore the same rejection applies to this

claim.

As per claim 8, Huang teaches:

The method as recited in claim 7, wherein the goal of said optimization engine is maximization of product gross profit (see column 61 lines 27-67 – column 99 lines 1-4; where the system optimizes sales and production costs (revenue and costs) to ultimately determine product gross profit.).

As per claim 9, Huang teaches:

The method as recited in claim 7, wherein the goal of said optimization engine is optimizing the trade-off between product gross profit maximization and inventory write-off cost minimization (see column 61 lines 27-67 – column 99 lines 1-4; where the system optimizes sales and production costs (revenue and costs) to ultimately determine product net profit.).

As per claim 10, Huang teaches:

The method as recited in claim 7, wherein business rules are applied to said optimization engine (see column 61 lines 27-67 – column 99 lines 1-4; where constraints are used in the linear programming. Business rules are defined as constraints (see specification p. 13 lines 23-27).).

As per claim 11, Huang teaches:

The method as recited in claim 10, wherein said business rules comprise:

objectives, budgets, parts procurement limits, and build capacity (see column 13 lines 9-67 – column 14 lines 1-4 and column 19 lines 63-67 – column 24 lines 1-48; where budgets, key parts procurement, production capacity, and other costs are constraints in the linear programming optimization of the production

plan. Objectives are business rules, where business rules are constraints (see specification p. 13 lines 23-27).).

As per claim 12, Huang teaches:

A computer system comprising:

a bus (see column 102 lines 30-67 – column 103 lines 1-35; where the server requires maximum speed, storage space, memory and network connectivity. These elements are connected by a bus.);

a memory unit coupled to said bus (see column 102 lines 30-67 – column 103 lines 1-35; where the server requires maximum speed, storage space, memory and network connectivity. These elements are connected by a bus.); and

a processor coupled to said bus, said processor for executing a method for defining an optimal integrated action plan for procurement, manufacturing, and marketing comprising (see column 102 lines 30-67 – column 103 lines 1-35 ; where the server requires maximum speed, storage space, memory and network connectivity. These elements are connected by a bus.):

Claim 12 further recites limitations already addressed by the rejection of claim 1; therefore the same rejection applies to this claim.

Claim 13 recites limitations already addressed by the rejection of claim 9; therefore the same rejection applies to this claim.

Claim 14 recites limitations already addressed by the rejection of claim 10; therefore the same rejection applies to this claim.

Claim 15 recites limitations already addressed by the rejection of claim 11;

therefore the same rejection applies to this claim.

As per claim 16, Huang teaches:

The computer system of claim 15, wherein said objectives comprise:

revenue, write-off, and profit (see column 13 lines 9-67 – column 14 lines 1-4 and

column 19 lines 63-67 – column 24 lines 1-48; where budgets, key parts

procurement, production capacity, and other costs are constraints in the linear

programming optimization of the production plan.  Objectives are business rules,

where business rules are constraints (see specification p. 13 lines 23-27).).

Claim 17 recites limitations already addressed by the rejection of claim 2;

therefore the same rejection applies to this claim.

As per claim 20, Huang teaches:

The computer system of claim 17, wherein said integrated action plan is further

comprised of metrics (see column 19 lines 32-67 – column 99 lines 1-4; where the

system accounts for revenue, inventory write-off, profit, and competitor pricing.).

As per claim 21, Huang teaches:

The computer system of claim 20, wherein said metrics comprise:

revenue, write-off, profit, and shadow prices (see column 19 lines 32-67 –

column 99 lines 1-4; where the system accounts for revenue, inventory write-off,

profit, and competitor pricing.  For the purposes of examination, shadow prices

are interpreted to mean prices offered by other competitors.).

As per claim 22, Huang teaches:

The computer system of claim 12, wherein said pricing parameters are obtained from a discrete said parameterized demand curve (see column 12 lines 51-67 – column 13 lines 1-7, column 18 lines 7-67 – column 25 lines 1-5, and figures 11, 12, 14, 56, and 57; where the demand management uses sales forecasts and marketing data to create demand parameters, including forecasted sales volumes, costs, and finished product prices. Based on the linear programming and mixed integer linear programming models, these parameters can be set as variables or actual values can be placed in to the variables, thus making the demand curve discrete or continuous. Different models are proposed for parameters that fluctuate and for those parameters are that are static as well. Parameterized demand curve in the present invention is defined as the evaluation of sales information to create a distinct marketing goal (see specification p. 10 lines 6-14).).

Claim 22 further recites the limitation of "end of product life" which is addressed in the rejection of claim 1; therefore the same rejection applies to this claim.

As per claim 23, Huang teaches:

The computer system of claim 12, wherein said pricing parameters are obtained from a continuous said parameterized demand curve (see column 12 lines 51-67 – column 13 lines 1-7, column 18 lines 7-67 – column 25 lines 1-5, and figures 11, 12, 14, 56, and 57; where the demand management uses sales forecasts and marketing data to create demand parameters, including forecasted sales volumes, costs, and finished product prices. Based on the linear programming and mixed integer linear programming models, these parameters can be set as variables or actual values can

be placed in to the variables, thus making the demand curve discrete or continuous. Different models are proposed for parameters that fluctuate and for those parameters are that are static as well. Parameterized demand curve in the present invention is defined as the evaluation of sales information to create a distinct marketing goal (see specification p. 10 lines 6-14).).

As per claim 24, Huang teaches:

The computer system of claim 12, wherein said mathematical programming model and technique is obtained from the family of mathematical programming models and techniques comprising:

mixed integer models, linear models, non-linear models, and techniques such as simplex methods, interior point methods, branch and bound (cut), constraint programming, and meta-heuristics (see column 61 lines 27-67 – column 99 lines 1-4; where the optimization is done using linear programming and mixed integer linear programming.).

As per claims 25-26 and 29-35, Huang teaches a "computer-readable program code" (see column 13 lines 9-67 – column 14 lines 1-4, column 27 lines 1-67 – column 28 lines 1-24, column 102 lines 30-67 – column 103 lines 1-35 and figure 67; the system parameters and constraints are embedded in a computer-readable program). Claims 25-26 and 29-35 further recite limitations already addressed by the rejection of claims 1-2 and 5-11; therefore the same rejections apply to these claims.

### Conclusion

6.      The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.  The following are pertinent to the current invention, though not

relied upon:

Santos et al. (U.S. Patent Publication No. 20020143665) teach a method of

managing product end of life over an end of life horizon includes the step of selecting an

objective of either maximizing gross profit or minimizing writeoff costs for a selected

plurality of products being discontinued. The products may have parts in common.

Eder (U.S. Patent No. 5615109) teaches a computer based inventory control

method and system, feasible profit maximizing sets of requisitions are created. System

processing starts with the creation of detailed, multi-dimensional forecasts of sales and

cash receipts using stored algorithms and data preferentially extracted from a basic

financial system and the adjustment of the forecasts to match the controlling forecast

specified by the user.

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action.  Accordingly, **THIS ACTION IS MADE FINAL**.  See MPEP

§ 706.07(a).  Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.  In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

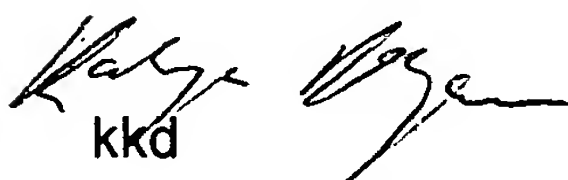mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kalyan K. Deshpande whose telephone number is

(571)272-5880. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

kkd

**SUSANNA M. DIAZ**
**PRIMARY EXAMINER**

AU 3623